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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,197	08/22/2003	John D. Santi	018367-9819-00	9046

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EXAMINER	
CHANG, CHING	
ART UNIT	**PAPER NUMBER**
3748	

DATE MAILED: 05/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/646,197	SANTI, JOHN D.	
	Examiner	Art Unit	
	Ching Chang	3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,9-19,21-28,31-35 and 64-71* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *22-28,31-35 and 65* is/are allowed.

6)☒ Claim(s) *1-7,9-19,21,64 and 66-71* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *01/03/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 03/07/2005 has been entered. Claims 8, 20, 29-30, and 36-63 are cancelled, and new claims 64-71 are added as requested.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. ***Claims 1-6, 9-18, 21, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gracyalny et al. (US Patent 6,349,688) in view of Feeny (GB 156,038).***

Gracyalny discloses a valve-operating lever (See Fig. 4) comprising: a valve arm (208) defining a valve arm engagement portion (through welding with 212); a connector

member (212); a first stop (between 208 and 212 by welding) at least partially define a first engagement portion, the valve arm engagement portion engaging the first engagement portion; and a second stop (between 208 and 212 by welding), the first stop and second stop in contact with the valve arm to inhibit movement of the valve arm along a longitudinal axis defined by the connector member; wherein the connector member includes a cylindrical tube; wherein the valve arm defines a valve arm thickness; wherein the valve arm is formed from a stamped metal; wherein a follower arm (204) includes a follower surface (180) adapted to engage a cam surface (164); wherein the valve arm includes a valve actuating portion (200) adapted to actuate a valve in response to movement of the follower arm; wherein the connector member includes a third stop (between 212 and 204 by welding), the connector member and the third stop cooperating to define a second engagement portion; wherein the follower arm defines a follower arm thickness.

Gracyalny discloses the invention as recited above, however, fails to disclose the connector member being engaged with the valve arm and the follower arm, through an aperture on each said arms, the valve arm being sandwiched between the stops, and the stops being integrally-formed as part of the connector member.

The patent to Feeny on the other hand, teaches that it is conventional in the mechanical components joint art, to utilize a first stop (20) including a shoulder, a second stop (21) including a lip to sandwich a plate (11) between the said stops at one end of a connector member (14), through a circular aperture on plate, wherein all the

stops are integrally-formed as part of the connector member, and overlay a portion of the plate (See Figs. 4-9).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the end joint stops as taught by Feeny to join the connector member with the valve arm and the follower arm in the Gracyalny device, since the use thereof would provide a light weight, and cost effective engine valve operating-lever.

3. ***Claims 1-6, 9-18, 21, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gracyalny et al. (US Patent 6,349,688) in view of Dudash et al. (US 5,769,499).***

Gracyalny discloses a valve-operating lever (See Fig. 4) comprising: a valve arm (208) defining a valve arm engagement portion (through welding with 212); a connector member (212); a first stop (between 208 and 212 by welding) at least partially define a first engagement portion, the valve arm engagement portion engaging the first engagement portion; and a second stop (between 208 and 212 by welding), the first stop and second stop in contact with the valve arm to inhibit movement of the valve arm along a longitudinal axis defined by the connector member; wherein the connector member includes a cylindrical tube; wherein the valve arm defines a valve arm thickness; wherein the valve arm is formed from a stamped metal; wherein a follower arm (204) includes a follower surface (180) adapted to engage a cam surface (164); wherein the valve arm includes a valve actuating portion (200) adapted to actuate a

valve in response to movement of the follower arm; wherein the connector member includes a third stop (between 212 and 204 by welding), the connector member and the third stop cooperating to define a second engagement portion; wherein the follower arm (470) defines a follower arm thickness.

Gracyalny discloses the invention as recited above, however, fails to disclose the connector member being engaged with the valve arm and the follower arm, through an aperture on each said arms, the valve arm being sandwiched between the stops, and the stops ebing integrally-formed as part of the connector member.

The patent to Dudash on the other hand, teaches that it is conventional in the mechanical components joint art, to utilize a first stop (the swaged portion of 50) including a shoulder, and a second stop (contacted with 39) including a lip, in order to sandwich an arm (38) between the said stops at one end of a member (50) (See Fig. 9), through a circular aperture on the arm, wherein all the stops are integrally-formed as part of the connector member, and overlay a portion of the arm.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the end joint stops as taught by Dudash to join the connector member with the valve arm and the follower arm in the Gracyalny device, since the use thereof would provide a light weight, and cost effective engine valve operating-lever.

4. ***Claims 7 ad 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gracyalny in view of Feeny (as applied to claims 1 and 18 above), and further in view of Zubeck (US Patent No. 6,550,435).***

The modified Gracyalny device discloses the invention, however, fails to disclose at least one of the valve arm engagement portion, the first engagement portion, the follower arm engagement portion, and the second engagement portion having knurls.

The patent to Zubeck on the other hand, teaches that it is conventional in the art of a roller finger follower assembly, to utilize knurls on the engagement surfaces to press fit cams (48) into a lash pin (36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized knurls on the engagement surfaces as taught by Zubeck in the modified Gracyalny device, since the use thereof would provide an alternative valve actuating lever in application.

5. ***Claims 7 ad 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gracyalny in view of Dudash (as applied to claims 1 and 18 above), and further in view of Zubeck (US Patent No. 6,550,435).***

The modified Gracyalny device discloses the invention, however, fails to disclose at least one of the valve arm engagement portion, the first engagement portion, the follower arm engagement portion, and the second engagement portion having knurls.

The patent to Zubeck on the other hand, teaches that it is conventional in the art of a roller finger follower assembly, to utilize knurls on the engagement surfaces to press fit cams (48) into a lash pin (36).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized knurls on the engagement surfaces as taught by Zubeck in the modified Gracyalny device, since the use thereof would provide an alternative valve actuating lever in application.

6. ***Claims 1-5, 12-14, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dudash et al. (US Patent 5,769,499).***

Dudash discloses an arm (38) including a first aperture (See Figs. 8-9) defining a valve arm engagement portion; a connector member (56; 50); a first stop (59) integrally-formed as part of the connector member to at least partially define a first engagement portion, the valve arm engagement portion engaging the first engagement portion; and a second stop (61) integrally-formed as part of the connector member and positioned such that the valve arm is sandwiched between the first stop and the second stop, the first stop and second stop in contact with the valve arm to inhibit movement of the valve arm along a longitudinal axis defined by the connector member; wherein the first aperture is substantially circular; wherein the connector member includes a cylindrical tube; wherein the first stop includes a first reduced-diameter portion that defines a first shoulder (See Figs. 8-9); wherein the valve arm defines a arm thickness and wherein the first engagement portion defines an axial length that is at least as great as the valve

arm thickness (See Figs. 8-9); wherein the first stop and the second stop overlay a portion of the arm; wherein the first stop defines a first diameter having a first center and the second stop defines a second diameter having a second center, the first center and the second center being substantially disposed on the longitudinal axis.

With regard to section 103(a), the Examiner deems that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the teaching about the joint (See Figs. 8-9) between two aforementioned components (38, 56, and 50) in a vehicle from the Dudash reference, to develop a further application on valve train, wherein a valve actuation lever would have a reliable connection with a driving member.

7. ***Claims 66-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dudash et al. (US Patent 5,769,499).***

Dudash discloses a connector member (50) including a first end and a second end and defining a longitudinal axis extending through the first end and the second end; a first stop positioned near the first end of the connector member (See Fig. 9); a second stop positioned near the first end of the connector member (see Fig. 9); and an arm (38) fixed with respect to the connector member and at least partially positioned between the first stop and the second stop such that the first stop and the second stop cooperate to substantially prevent movement of the valve arm relative to the connector member along the longitudinal axis (See Fig. 9); wherein the first stop defines a first center and the second stop defines a second center, the first center and the second center

substantially disposed on the longitudinal axis; wherein the first stop (part of the swaged portion on 50) includes a shoulder and the second stop (contacted with 39) includes a lip; wherein the first stop and the second stop are integrally-formed as part of the connector member.

With regard to section 103(a), the Examiner deems that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the teaching about the joint (See Fig. 9) between two aforementioned components (38, and 50) in a vehicle from the Dudash reference, to develop a further application on valve train, wherein a valve actuation lever would have a reliable connection with a driving member.

8. ***Claims 66-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gracyalny et al. (US Patent 6,349,688) in view of Feeny (GB 156,038).***

Gracyalny discloses a valve-operating lever (See Fig. 4) comprising: a connector member (212) including a first end (the contact between 212 and 208) and a second end (the contact between 212 and 204) and defining a longitudinal axis extending through the first end and the second end; a first stop (a welding spot in Fig. 4) positioned near the first end of the connector member; a second stop (a welding spot in Fig. 4) positioned near the first end of the connector member; and a valve arm (200, 208) fixed with respect to the connector member, and the first stop and the second stop cooperate to substantially prevent movement of the valve arm relative to the connector member along the longitudinal axis; wherein the first stop defines a first center and the

second stop defines a second center, the first center and the second center substantially disposed on the longitudinal axis; and further discloses a third stop (a welding spot in Fig.4) positioned near the second end of the connector member; a fourth stop (a welding spot in Fig. 4) positioned near the second end of the connector member; and a follower arm (204) fixed with respect to the connector, and the third stop and the fourth stop cooperate to substantially prevent movement of the follower arm relative to the connector member along the longitudinal axis.

Gracyalny discloses the invention as recited above, however, fails to disclose the said valve arm being at least partially positioned between the first stop and the second stop, and the said follower arm being at least partially positioned between the third stop and the four stop.

The patent to Feeny on the other hand, teaches that it is conventional in the mechanical components joint art, to utilize a first stop (20) including a shoulder, a second stop (21) including a lip to fix a plate (11) to a one end of a member (14) (See Figs. 4-9), wherein all the stops are integrally-formed as part of the connector member.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the end joint stops as taught by Feeny to join the connector member with the valve arm and the follower arm in the Gracyalny device, since the use thereof would provide a light weight, and cost effective engine valve operating-lever.

9. ***Claims 66-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gracyalny et al. (US Patent 6,349,688) in view of Dudash (US Patent 5,769,499).***

Gracyalny discloses a valve-operating lever (See Fig. 4) comprising: a connector member (212) including a first end (the contact between 212 and 208) and a second end (the contact between 212 and 204) and defining a longitudinal axis extending through the first end and the second end; a first stop (a welding spot in Fig. 4) positioned near the first end of the connector member; a second stop (a welding spot in Fig. 4) positioned near the first end of the connector member; and a valve arm (200, 208) fixed with respect to the connector member, and the first stop and the second stop cooperate to substantially prevent movement of the valve arm relative to the connector member along the longitudinal axis; wherein the first stop defines a first center and the second stop defines a second center, the first center and the second center substantially disposed on the longitudinal axis; and further discloses a third stop (a welding spot in Fig.4) positioned near the second end of the connector member; a fourth stop (a welding spot in Fig. 4) positioned near the second end of the connector member; and a follower arm (204) fixed with respect to the connector, and the third stop and the fourth stop cooperate to substantially prevent movement of the follower arm relative to the connector member along the longitudinal axis.

Gracyalny discloses the invention as recited above, however, fails to disclose the said valve arm being at least partially positioned between the first stop and the second

stop, and the said follower arm being at least partially positioned between the third stop and the four stop.

The patent to Dudash on the other hand, teaches that it is conventional in the mechanical components joint art, to utilize a first stop (the swaged portion of 50) including a shoulder, and a second stop (contacted with 39) including a lip, in order to fix an arm (38) to a one end of a member (50) (See Fig. 9), wherein all the stops are integrally-formed as part of the connector member.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the end joint stops as taught by Dudash to join the connector member with the valve arm and the follower arm in the Gracyalny device, since the use thereof would provide a light weight, and cost effective engine valve operating-lever.

Allowable Subject Matter

10. Claims 22-28, 31-35, and 65 are allowed.

Response to Arguments

11. Applicant's arguments with respect to claims 1-7, 9-19, and 21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patent Examiner

Ching Chang

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